

Design and Development of Sustainable and Inclusive Interactive Systems

LABORATORY / PROJECT / TEAM

LABORATORY: The LIST3N (Computer Science and Digital Society) laboratory develops efficient approaches (concepts, models, methods and tools) to deal with the entire data processing chain, from sensors to uses, via data analysis and optimization.

PROJECT: Since the beginning of the 21st century, studying the impact of digital technologies on our society has become increasingly relevant. Electronic devices and digital technologies play a major role in social interactions, as how and when we communicate has changed radically.

Recently, with the COVID-19 pandemic, the importance of digital devices and internet connectivity has grown even further, triggering a radical change in the way we approach work and education. However, the advances that have characterized these technologies have been marked by a considerable growth in their environmental impact, resulting in increased energy consumption. This internship is part of a wider scientific project aimed at designing and implementing software application prototypes that respect the environment without losing their effectiveness and efficiency.

MISSION DESCRIPTION

The COVID-19 pandemic has led companies and universities to equip themselves with several remote work tools, creating complex ecosystems that often have a strong impact on the environment in terms of energy consumption and carbon dioxide production. The aim of this internship is to design and implement software application prototypes that respect the environment without losing their effectiveness and efficiency.

Themes :

- **Sustainability and Performance:** The successful candidate will explore best practices and guidelines for the design of sustainable interactive systems. The aim is to reduce their environmental impact while maintaining optimal performance.
- **Inclusivity and Accessibility** The successful candidate will be involved in the design of interactive systems that meet the needs of a wide range of users, ensuring that accessibility is at the heart of the development process.

Main tasks :

- Conduct in-depth research on best practices and metrics for sustainability, inclusivity and performance for interactive systems.
- Propose innovative solutions for designing sustainable interactive systems, taking into account the various constraints linked to the environment and society.
- Participate in the prototyping and development of solutions using these metrics.
- Test these prototypes in real-life contexts.

RESEARCH PROFILE

Profile required:

- A student in computer science or a related field, with a keen interest in environmental and social issues related to technology.
- Knowledge of interactive systems design, software development and prototyping.
- Autonomy, creativity and initiative to propose innovative solutions.
- Fluency in English is a plus.

TERMS AND CONDITIONS

<u>Internship Start Date :</u>	Feb 2024 (or depending on student's availability)
<u>Internship Duration :</u>	6 months
<u>Location :</u>	Université de Technologie de Troyes (UTT), France
<u>Language :</u>	English / basic French
<u>Expected Internship Level:</u>	M1 or M2
<u>Area of expertise:</u>	Computer Science

APPLICATIONS

To apply, please send your CV and covering letter to ines.dj_loreto@utt.fr by *November 30, 2023*.